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ABSTRACT

This report covers the evaluation of preliminary field testing of a 1-year experimental training program designed to reach a larger number of Head Start teachers and teacher aides at a lower cost but provide an inservice program that was at least as good as an 8-week college program. The program began with a 4-day workshop for 60 teachers and aides, after which participants recieved 16 inservice training units, which included learning episodes, films of model teachers, and a videotape. After practicing with the materials and viewing the film, teachers videotaped themselves using the learning episode with a group of children and then mailed the tapes to the Laboratory for critiquing. Although subjective evaluation of the program by participants was very favorable, evaluation accomplished through analysis of videotapes and assigning teachers to one of five levels of competence indicated that the program was a failure with 40 percent of the participants, moderately successful. Recommendations for changes included decreasing the number of units used, providing faster critiquing of videotapes, and granting college credit for the course. (An appendix contains an outline of the inservice program and some examples of learning episodes.) (RT)

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A PRELIMINARY REPORT ON AN EXPERIMENTAL TRAINING PROGRAM FOR HEAD START TEACHERS AND ASSISTANTS

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To

The Head Start Program
OFFICE OF ECONOMIC OPPORTUNITY

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Introduction

Training Head Start teachers and assistants is a tremendous task. The need far exceeds the talent and funds that are available using conventional procedures. This report covers the evaluation of preliminary field testing of an experimental training program that was designed to reach a larger number of teachers and assistants at a lower cost but provide an inservice program that was at least as good as an eight-week college program. The program was developed at the New Nursery School at Colorado State College in Greeley, Colorado, and field tested by the Far West Laboratory for Educational Research and Development.

The experimental program started with a four-day workshop for thirty teachers and thirty teacher assistants located in six centers in California. Following the workshop each teacher and assistant received sixteen inservice training units. Each unit contained four learning episodes (a brief two-or three-page description of how to use a game or toy to help children learn a specific skill or concept), a paper discussing some general topic, such as classroom control or the use of language with young children, a set of instructions on the use of the inservice unit, a film clip showing a model teacher using a learning episode and a videotape. The teachers and assistants were asked to read the material, select one learning episode, practice using it and then videotape themselves using the episode with a group of children. The teachers mailed the videotapes to the Laboratory, where the tapes were viewed and critiqued. The critique, along with the videotape, was mailed back to the teacher so she could view the tape again and read the suggestions that had been made by the critiquers. The principal author of the training materials was Oralie McAfee, Head Teacher at the New Nursery School. In a revised and expanded form, they will be published in a book by Glen Nimnicht, Oralie McAfee and John Meier (General Learning Corporation 1969).

An outline of the inservice training program and some examples of learning episodes and general papers included in the inservice units are in Appendix A. The program was designed to train the teachers to use a particular set of procedures to accomplish a specific set of objectives. The procedures and objectives were based upon the program that had been developed and tested at the New Nursery School.

The entire school is organized as an autotelic responsive environment. An autotelic activity is one done for its own sake rather than for obtaining rewards or avoiding punishment that have no inherent connection with the activity itself.

A responsive environment satisfies the following conditions:

1. It permits the learner to explore freely;

2. It informs the learner immediately about the consequences of his actions;

3. It is self-pacing, i.e., events happen within the environment at a rate determined by the learner;

4. It permits the learner to make full use of his capacity for discovering relations of various kinds; and

5. Its structure is such that the learner is likely to make a series of interconnected discoveries about the physical, cultural or social world (Moore, 1963, p. 2).

By insisting that all organized activities within the school are autotelic, we create a situation where we know the child is doing something because he wants to and not because an adult is applying pressure. This means that in observing the child's behavior in the classroom the child makes choices and carries out activities that are not pressed upon him by an adult. Thus, we can study curriculum development, and the relationship between maturation and learning without fear of pushing the child beyond desirable limits.

The notion of a responsive environment is equally important. We control what the child will do by the choices we make about what to include in or exclude from the school environment. Once the child enters the classroom, he is free to explore. He can spend as much time on any activity as he likes; no one will ask him to stop one activity to begin another. This has some important consequences. For example, the concept of "short attention span" must be modified. It is true that children do have a short attention span if they are required to do what the adult wants to do when the adult wants to do it. But when the children are allowed to choose their own activities, this generalization no longer holds. At the New Nursery School many children have listened attentively while being read to for an hour and a half. One child painted 25 pictures without stopping. Another spent three hours, except for time out for refreshments, playing a game which required him to recognize and match pictures. Some children spent over half of their time, particularly at the beginning of the year, playing with the blocks. But as the year progressed their activities became more varied and they spent some time in the reading corner, the listening corner, or the manipulative toy area. There are group activities such as singing and story telling, but no child is required to take part. At the beginning of the year several (five or six of the 15) chose not to join the group, but day by day they scooted closer until they also joined in the activities. After that it was a rare occasion when a child chose not to participate.

The notion that the environment informs the learner immediately about the consequences of his actions determined the kind of equipment that is used at the New Nursery School, the way it was used, and the behavior of the teacher and her assistants. The learner is informed either by the self-correcting toys, machines, other children, or the teacher. Most of the manipulative toys are self-correcting. The nesting and stacking toys go together or stack in only one way, the puzzles are the same. Concentric circles, squares, or rectangles must fit inside each other to complete the pattern, and so forth. The Bell and Howell Language Master is an example of a machine that tells the child about the consequences of his actions. A child can operate the machine without assistance. The Language Master records and plays back sound recordings on a magnetic tape located across the bottom of cards. One can write or draw on the card so that a child sees and hears something at the same time he hears it described. For example,

the colors can be painted on cards and "This color is red," and so forth, can be recorded on one of the sound tracks. The child can then run the cards through the machine to find out the name of the color on it.

The teacher and her assistants are regarded as part of the responsive environment and are another source for the child to use in finding out the consequences of his acts. The important thing for the teacher and her assistants to remember is that they are a part of the responsive environment and therefore must respond appropriately to the child as he spontaneously encounters and manipulates his surroundings--they do not "teach," lead or direct but see their role as facilitating children's learning. This statement will become evident as we elaborate upon the specific approaches we use to obtain the objectives of the school but in general we encourage the teacher to:

1. Minimize adult-initiated conversation but encourage child-initiated conversation;

2. Refrain from asking a child if he wants to be read to but always read to him when he asks to be read to;

3. Avoid asking a child to give up one activity to do something else;

4. Never insist that any child come to a group activity.

Most of a child's three hours each day at the school is spent in self-directed activities such as painting, working puzzles, looking at books, dressing up, building with blocks, and a host of other activities. About 15 minutes a day are devoted to group activities such as singing, listening to a story, or participating in a planned lesson.

Evaluating Procedures

The Laboratory follows a relatively systematic sequence of steps in developing materials and procedures. The first step in the development process is to select a promising approach and invent or design a prototype as a model for examination. In this instance the program for deprived children developed at the New Nursery School seemed to provide an adequate setting within which to test a model inservice training program for Head Start teachers. The inservice program was then designed to utilize six of the most promising procedures that could be adapted to this setting. It used a modified form of micro-teaching that was being developed at the Research and Development Center at Stanford University and the notion of providing the instruction in specific units (learning episodes) consisting of a limited amount of presented material at frequent intervals over a long period of time (entire school year) - a psychologically sound principle. Each learning episode was detailed and written to be understood by teachers and designed to accomplish specific objects that could be evaluated.

The next step in the Laboratory's development sequence is to conduct a preliminary test of the procedures and materials in a smaller number of classrooms, revise the materials and procedures based upon the results of

that preliminary test, then conduct a second preliminary test if necessary. After a satisfactory preliminary test is accomplished the process moves on to the performance test which involves more testing in a large number of classrooms under the direct control of the Laboratory. The function of the performance test is to determine that the development performs in a way to meet the specified objective. If the main field test indicates that additional revisions are necessary they are made before an operational test is conducted under normal field conditions and with limited involvement by the staff of the Laboratory.

Usually the first reporting on the results of the testing and evaluation occurs after the performance test. This report is a departure from the usual sequence of events because it reports on a preliminary test. We are reporting after the preliminary test because (1) there is considerable interest in this approach and other developers may be aided by a report on our experience to date; (2) even though considerable work remains to be done the results are promising; (3) the program is a complex one and may require several years of testing before it is ready for general dissemination. In the meantime some limited use might be made of the program by others even though it is still an early developmental stage.

Our plan for the preliminary field test was to make classroom observations prior to the start of the inservice program and videotape observations at the end of the year. Neither part of the plan worked as we had intended. The funding of the program was delayed until mid-October. The staff had to be recruited and trained after that time. The school year was already well underway and to complete the program during that year required an immediate start. Observations had to be delayed until the program was in operation. The problems of initiating the program, and delivering of the videotape recorders, and instructing the teachers in their use, consumed much of the time of our limited staff with the result that some classrooms were not systematically observed until after January 1st.

Videotaping a sample of activities within the classroom at the end of the year did not prove to be feasible. The videotaping of a single learning episode is not satisfactory for evaluation of the program because one gets information about only a very narrow range of teacher behaviors, while most of the teacher's behavior in the general classroom setting goes unobserved. However, it is relatively easy to tape a teacher using a learning episode since one knows where the teacher will be. It is much more difficult to videotape the teacher as she works in the normal classroom with small groups of children, changing materials, and maintaining discipline. The camera and microphone must be moved after her if her behavior is to be recorded, but to move the equipment around in such a fashion creates an artificial situation of limited value for evaluating the effectiveness of the program.

Despite these limitations, we did obtain some useful information from classroom observations, interviews, and questionnaires obtained from the teachers during and after the training period. The report is organized around the following set of questions:

1. How satisfactory was the material that was included in the inservice units?

   1a Is the content appropriate for the children who are involved?

   1b Is the written material understandable by the teachers and teaching assistants?

   1c Is there too much or too little material for the time involved?

2. Was the way in which the training program conducted satisfactory?

   2a Was the initial workshop of value?

   2b How valuable did the videotaping of learning episodes prove to be?

   2c How valuable were the model film clips?

   2d How was the two-week interval for mailing the inservice units workable?

   2e What other variables affected the training?

3. What changes in behavior occurred on the part of the teacher?

   3a Did changes take place, and what appears to have contributed to these changes?

   3b How do the changes that occurred compare with those occurring in an eight-week training program conducted on a college campus?

4. How did the general belief system or attitudes of a teacher relate to the changes that occurred in her behavior?

The Material

Is the content appropriate for the children who are involved? The children who were involved were mostly four-year-old Mexican-American, Negro and Indian children who were enrolled in Head Start classrooms. At a one-day meeting at the end of the inservice program, 28 teachers and assistants responded to a question on the difficulty of the units. Fifteen (57%) thought the learning episodes were the right level of difficulty; 12 (42%) thought the episodes were too easy and one respondent who had three-year-old children, thought the learning episodes were too difficult.

Was the written material understandable to the teachers and teaching assistants? The answer is generally "yes" but the teaching assistants had a difficult time understanding some of the training units. The particular units that caused difficulty were identified.

Some of the participants did not like one unit because the learning episodes in that unit were not interesting to the children.

Some of the participants did not like a second unit because the learning episodes required equipment that they did not have, i.e., the Language Master.

A third unit was long, over 40 pages, and some of it included the reporting of research data on language development which was not written in a manner for some of the trainees to understand.

A fourth unit included a rather long and involved discussion of problem-solving. This proved difficult for many participants to understand.

Our conclusion is that these four units need to be revised and all of the units shortened and simplified if the assistants as well as the teachers were to get the maximum benefits from them.

Is there too much or too little material for the length of the course?

The respondents were unanimous in their judgment that there was too much material for them to cope with during the one year. Eighty percent of the respondents believe that the program should cover a two-year period of time because they had only been able to use a small amount of the material by the end of the year.

Although it is possible to have produced too much material for the training program and also to have made it too easy for the children there may be another way of looking at these results. It is possible that the teachers' response that there was too much material is in part offset by the comment of the 42% who thought the material was too easy for their children. Teachers receive the easiest learning episodes first and the more difficult ones later. If all of the episodes had been available at one time there probably would have been ample material to provide a challenge for all of the four-year-old children. Furthermore, there are some indications that the teachers who responded that the material was too easy did not understand the use of the learning episode. For example, one teacher who was very critical when she first reviewed the material concluded after further study that if it were used correctly, it would be suitable for most kindergarten children. In fact, it covers most of the objectives that are listed for kindergarten in such districts as Fresno and Berkeley, California.

Our observations of the classrooms confirm the teacher reaction that two years for the program would be desirable. Most of the teachers concentrated on only a small portion of the training material, often neglecting important program components.

The Conduct of the Training Program

Was the initial workshop of value?The only evaluation we have of this workshop is the judgment of the teachers and assistants. In response to the question asked at the end of the training program to list the three main strengths and three main weeknesses of the program, 17 of the 28 respondents listed the workshop as a major strength while only three listed it as a major weakness.

How valuable was the videotaping of the learning episodes? The instructions asked the trainees to read the learning episodes, view the film clip of a model teacher using one of the episodes, and then select one episode to videotape. The videotape was done in the classroom by the teacher and assistant without outside assistance. Since the learning episodes were designed to be used with a small group of children using a limited amount of material or equipment, the camera could be focused on the table or space to be used for the learning episode and left in one place during the videotaping. The visual and audio quality varied but all of the tapes received by the Laboratory could be understood and critiqued. Because the trainee was in control of videotaping she could erase a tape if she did not like the results or at the end of the episode she could comment on her own performance. Many of the teachers and assistants did practice several times on a learning episode before they mailed the videotape to the Laboratory, but none of the teachers commented on their own tape.

Since the learning episodes covered a wide variety of content and involved the teacher or assistant in different ways, each learning episode had to be evaluated on the basis of objectives of that particular episode. For example, the sample of materials in the Appendix starts with Learning Episodes I, II, III, and IV from Training Unit I. If the teacher chose to videotape Episode III, the critiquer would read the procedures and look for specific behaviors that are indicated for the teacher. In this instance the critiquers watch to see if the teacher:

1. Said to the child, "Show me where it is."

2. Said, "Tell me what color it is."

3. Expanded the child's one-word answers into a complete sentence.

4. Adjusted the game according to the behavior of the child, i.e., provide additional cues.

In addition to observing for these specific objectives in each learning episode, the critiquer observed for the language behaviors outlined in the general paper, "Language Guides for Teachers of Young Children" (included in the Appendix) and for the relationships between the teacher or assistant and the children. We were concerned with such things as:

1. Was there any behavior that indicated the children were free to come and go as they chose?

2. Was there behavior that disrupted the group? How did the teacher respond?

3. Did the teacher or assistant adjust the game according to the ability of individual children?

4. What kind of control did the teacher exercise?

In writing up the critiques we avoided giving general praise such as, "We like the way you used this episode," or "You did an excellent job." Instead the letters usually began with specific praise such as, "We liked the way you adjusted the learning episode by making it more difficult and interesting for Robert and Mary," or "We liked the way you responded to the problem with Max. That was an excellent way to handle the situation." We look for ways to give positive corrections such as, "You said, 'It is a cat,' which is alright, but it would have been better to say, 'The animal is a cat,' because the category word, animal, is used in the sentence."

The key elements in all of the critiques were: (1) specific praise for behaviors we wanted to reinforce, and (2) positive but specific corrections of behaviors we wanted to change and specific suggestion on behavior which was absent but we wanted to encourage. Each tape was viewed at least three times during a critique.

The original plan was to have the teacher and assistant videotape a single episode once every two weeks and mail it to the Laboratory for critiquing. The critique plus the videotape would then be returned to the teacher, who could view the tape again and react to the critique before videotaping the next learning episode.

The two-week time interval was not long enough for a variety of reasons. Each unit advises that materials be laid out in the classroom for at least a week to two weeks before being used. This allows children to look, touch, manipulate new equipment. In addition the practice and use of any one episode might take more than another week. The result of sending out training units at two-week intervals was to focus the participant on one of the four episodes; the other three episodes often went unused. Also because the taping of episodes had to be done on a tight schedule the teacher might have only one opportunity to tape an episode during the two-week period. This forced some participants to be insensitive to the reluctance of children to participate in an episode.

Also it proved difficult to allow each Head Start classroom to have the video-unit for at least two days during a two-week period. The program had one videotape recorded for each five classrooms, which means that the video-tape recorder should have been moved every other day on the two-week schedul to allow each teacher and assistant to videotape an episode. This schedule was too difficult to meet because of the size of the machine (a one-inch Ampex) and location of the classrooms. Unless the machine could be rolled or carried from one classroom to the next, a station wagon was necessary to move it.

We made some adjustments during the course of the year by having the teacher and assistants videotape two episodes each time they had the videotape recorder and reducing the need to move it by 50%.

Without doubts we can say that the videotaping of the learning episodes helped to stimulate and maintain the teachers' interest in the program. At the beginning workshop the majority of the teachers expressed some concern

about the videotaping of learning episodes, but at the final meeting all of the teachers and assistants who attended said it helped to see themselves on videotape. Ninety percent approved of the critiques of the videotapes. They particularly commented that the critiques they liked best were the ones that contained the most specific recommendations for improvement and they were disappointed when the critiques were complimentary.

The greatest changes in behavior occurred in language. Most of the participants adopted our recommendations on specific language behavior. By the third tape the teacher's or assistant's language usually showed marked improvement. It proved more difficult to modify the teachers' other behavior, which could not be so carefully specified. For instance, many of the teachers and assistants could see that "John needed to drop back to the non-verbal identification of colors; he obviously is not ready to name them," when it was pointed out to them, but this kind of comment rarely helped a teacher to recognize and respond to a similar situation if it occurred later.

How useful were the model film clips? We produced 16 film clips varying in length from five to ten minutes. Each film clip showed a teacher or an assistant using one of the learning episodes included in the training unit. The teachers were asked to view the film clip before videotaping their own learning episodes. The idea was that seeing a model of the desired behavior helps a person learn that behavior. We made no effort to test this idea empirically.

The only evidence we have for making a judgment on the use of the film clips is the teachers' response at the end of the program. Twenty-four of 26 teachers and assistants who responded reported that the films helped them to understand the learning eposides.

What other variables related to the training? We cannot identify all of the variables that had some effect on the program but some were obviously of prime importance. The videotape recording equipment itself was a factor. Seventeen of the respondents thought the critiques of the videotapes were a strong feature in the program and only three thought it was weak; however, ten people answered that use of the videotape machine was one of the weakest parts of the program. The negative reactions were related to the (sometimes) strict schedule for using the videotape recorder, moving it from place to place and lack of operational reliability. The teacher's reaction to the equipment had an obvious effect on the number of videotapes she mailed to the Laboratory for critiquing.

The variable that appears to account for the greatest difference in the estimated magnitude of changes in behavior of teachers was the absence or presence of someone in the administrative structure who was interested enough in the program to assign a reasonably high priority to it. In the centers where someone made certain the videotape recorder was moved on schedule, encouraged the teachers to mail in their videotapes of learning episodes, visited classrooms and discussed the program with the teachers, we obtained the best results. In the one center where there were internal problems at at the administrative level and only passive acceptance of the program, the program apparently was of little value. In that center, only two teachers

completed the course and neither of them achieved minimum success as we will define it later in the report.

Since some of the teachers and assistants were pressed to obtain credit to remain qualified to teach, there was a natural desire that any training program provide this credit. One participant dropped out of the program because it lacked credit; several others complained about its absence. One teacher left the program to attend an eight-week training session for which credit was given.

Teachers felt the pressure of choosing between other responsibilities, such as duties at home, and continuing with the program.

The last variable worth noting was the problem of turnover in the teaching staff at the various centers. Five of the original thirty teachers (17%) dropped out of the program for one reason or another. Three resigned during the year, one dropped out of the program to attend an eight-week training session and one gave no explanation. Eight of the original thirty assistants (27%) dropped out of the program. Four resigned during the year, one expected to receive credit and when she found out that no credit was possible she quit, and three dropped out when their teachers dropped.

The Change in Behavior that Occurred on the Part of Teachers

Did significant changes take place? A tentative answer is yes, but the changes were not as great as we had expected. In the centers where the inservice program appeared to be most effective, the change in teacher behavior was judged to be at least as great as the changes that occurred during the eight-week training program at Colorado State College. Since both programs seemed to have produced desirable effects, this is considered as a modest measure of success of this program because it costs less than half as much per trainee as the eight-week program.

Before giving a detailed report on the kind of changes that have taken place, we would like to make some generalizations about the teachers and their classrooms as they were at the time of our first observation.

The most noticeable characteristic of the Head Start classrooms we observed in both California and Colorado was an emphasis on arts and crafts. The central part of the curriculum in many places was the daily project. Often these activities follow a theme set by the current season or forthcoming holiday. These art and craft activities require considerable planning and preparation by the teacher and assistant. In some classrooms the assistant devoted her time solely to such preparation.

Since only a very small number of separate art and craft activities can be planned, usually not more than one or two, it is not surprising that the activity develops into a group activity. Most or all of the children do together what the teacher has planned for them. Once they are finished or bored they must find something to do, e.g., in the book or block area--or else do nothing constructive.

This sort of art and craft activity was only one aspect of the general orientation of most classrooms (80% or more) toward group activity. In many centers the bulk of each day is spent in group activity, i.e., eating, resting, singing, dancing, listening to records, and making handicrafts. This is an important fact to remember because it helps to explain why the teachers in both the inservice training program and the course at Colorado State College respond to the program as they do.

Because of the orientation toward group activity there is a need for discipline and a tight schedule. However, in most of these classrooms discipline is lax. Children are allowed to interfere with one another and make as much noise as they please. Much of the teacher's time is spent pleading with children to behave themselves. Discipline is lax because Head Start teachers are by and large permissive in their attitudes toward child behavior. A basic contradiction exists between the teachers' group-oriented curriculum, which requires a high degree of coordination between children and the permissive nature of their attitudes concerning discipline. The writers think that it is this contradiction which leads the teachers to constantly inject novelty into their classroom activities. Instead of a feeling of continuity between the activities of one day and another, each day must offer a new and exciting experience. Connections between experiences are incidental. The teachers seem to attempt to use surprise to gain the children's attention. Unfortunately, the intensity of such an atmosphere seems to minimize the ability of the children to individually struggle with an intellectual probelm. The leisure required for thinking does not exist.

It is not that all the children's time is spent in group activity. In fact, in many classrooms there is a long period of free individual play. But these classrooms where much of the day is spent in individual activity are invariably those which are unplanned and chaotic. Equipment is quickly picked up and thrown down, stacked and unstacked by restless children. Violent play with trucks, dolls and blocks dominates the classroom. Almost without exception the only genuinely individual activity, that is, activity in which there is an atmosphere conducive to sustained interest, is painting.

The greatest obstacle to providing a responsive environment in the typical classroom, on the basis of our observation, is not an authoritarian attitude on the part of the teacher. The difficulty seems to be a lack of ideas. When the typical teacher is planning, she seems unable to imagine activities beyond group singing and fingerplays and group art and craft activities. A training program for these teachers has to overcome or change some ideas about the education of young children but more than that it most expands the teachers' notions of what can be done to help young children develop their intellectual ability.

It is a gross simplification to view the difference between the New Nursery School and the typical classroom we observed as more or less freedom for children. In fact, in most of these classrooms, we observed children had a large amount of freedom to do as they please. It is not the purpose of the training program discussed in this report to reduce that freedom of choice. Rather the programs seek to make individual choice of children meaningful by providing activities that children can choose from. In most of

these participating classrooms children were offered the limited choice among (1) a group activity which is new and interesting, (2) individual activity with materials which are in the classroom constantly and at which he will play without attention from the teacher, (3) causing trouble, (4) doing nothing. This is what freedom for children meant in most of these classrooms we saw on our first observations. One major objective of the training program is to suggest to the teachers ways of creating an environment which will make individual choice by children a rich and meaningful freedom instead of an empty and useless one.

Secondly, the training program attempted to make teachers aware of the need for a change in curriculum emphasis, so as to place more value upon early cognitive development. It was rare to observe a classroom where the teacher was trying to help children to learn anything cognitive whatsoever.

The two central aims of the training program, i.e., (1) to effect curriculum change and (2) to **help** teachers create an environment conducive to individual choice and activity are focused on the most striking deficiencies of most observed Head Start classrooms. These aims are conceptually distinct and in fact, the training programs occasionally achieve one of these goals but not the other. However, it is a most difficult matter to estimate separately the relative value of these two goals. The problem is that though the two aims are conceptually separate the value of one is likely to depend on the presence of the other. It is not necessarily the case that a teacher who subscribes to one of these goals but not the other is a better teacher than one who subscribes to neither. Consider, for example, the case of a teacher who changes her curriculum but implements the new concept formation activities by conducting rote learning drills, pestering children with questions and directing them from one activity to another. This classroom is not necessarily improved; in fact, it may be made worse. The children are likely to have had more freedom with the old arts and crafts curriculum and they will likely develop a distaste for learning in the new situation. Or take the opposite case of a teacher who begins, through a variety of methods, to make individual choice by children more important and meaningful but whose curriculum remains unchanged. Her classroom is surely improved but its effect on children is still trivial. The chief goal of helping children learn, would not have been achieved. It is for this reason that the training units stress in so concentrated a manner curriculum change.

To summarize: if the program effects only a change in methods the results are positive but likely to be trivial. If the program effects only a curriculum change, it is possible that its results may be negative.

These preliminary observations of classrooms and later observations made during the course of the year suggest that there is a sequence of development that a teacher may go through during this inservice training program and that the steps within this sequence can be utilized as criteria for evaluating the effectiveness of the program.

Level 0 -- The starting point for most of the early childhood teachers. The teacher focuses on group activities (arts and crafts) for the major portion of the day with some time for free indoor or outdoor play. The children have no real choice among activities. There is no evidence that the free time is being used for developing language or concept formation.

Or

The teacher focuses on arts and crafts but the major portion of the day is spent with the children involved in unfocused individual activities with no evidence of any particular curriculum. The behavior of the teacher does not indicate that she has thought about the possibilities of children learning that exist in the various areas of the room. For example, she does not appear to be using the activity in the art area to teach the names of colors, shapes, texture, etc. The block area is not used for developing relational concepts such as longer and shorter. Materials, toys, and games in the room are constant with no evidence of the teacher laying out a particular toy or game to accomplish a specific objective.

There is little or no evidence that the teacher is consciously working to develop the child's use of language.

Limited Changes - Level 1

The teacher used language directly and consciously that helps children develop their own language. (This is a logical first step in the inservice program because of the emphasis placed upon use of language and language development in the learning episodes.) Frequent questioning of the children is observed. The teacher uses learning episodes during group time but indoor play remains the same as at the beginning of the year. Arts and crafts receive much emphasis and most activities the children engage in are planned activities in large groups. The remainder of the time the children do as they please with no evidence that the teacher or assistants are using the activities of the children to accomplish any specific educational objective. No learning episodes are in use with small groups of children.

Level 2-A

In addition to the behaviors mentioned in Level 1, the teacher lays out materials to focus the attention of children on something that the teacher wants the children to learn of or about. The teacher is usually, but not necessarily sensitive to opportunities for language development while these materials are are being played with or looked over, i.e., the teacher describes the materials or what the children are doing. Occasionally she may question children but the main emphasis is the verbal information given by the teacher to the child. There are then two characteristics of this classification. The teacher carefully lays out materials related to some objective of a training unit, e.g., teaching children the names of colors. She is sensitive to opportunities to talk to the child about these materials.

Level 2-B

In addition to the behaviors mentioned in Level 1, the teacher has started to use learning episodes during individual play. However, these episodes are often used in an inflexible, over-structured way. The teacher is not sensitive to when or how to use the episode during the time that children are choosing their own activities and often turns this into another large group period.

This teacher often encourages or directs children to do certain things rather than letting them freely choose what they will do.

Level 3

This teacher uses learning episodes during group time and individual time. Indoor play is characterized by children engaging in a large variety of individual or small group activities. The teacher takes a lot of care in laying out and in changing materials. She may occasionally encourage a child to engage in an activity but depends for the most part on instrinsic interest and attractiveness of materials to stimulate and hold the children's attention. The teacher is flexible about using episodes. She keeps them brief and enjoyable; if a child becomes bored during one of these learning sessions, he is not encouraged to continue.

Level 4

The teacher exhibits all of the characteristics of a Level 3 teacher and in addition is creating her own material and developing her own learning episodes.

According to this preliminary scheme of classifying teachers., we have concluded that the program was a failure if the teachers did not advance beyond Level 1. Even though Level 1 teachers change their behavior somewhat, we could not justify the cost, time and effort of the program on the basis of such changes. If a teacher reached Level 2-A or 2-B, we believe we can conclude the program was a moderate success for those teachers. Even though in this case a teacher has not made as great an improvement as we hoped for and expected, they have started to change both their curriculum and procedures. The teachers in 2-A have made more changes in procedures and 2-B have made more changes in curriculum. Some of these teachers may not advance beyond this level, but we can hope that the majority will with additional time and practice.

If a teacher reached Level 3 we feel confident in concluding that the program was successful with that teacher.

No teacher reached Level 4 and it may be unrealistic to hope for or expect such a large change in the space of one year.

At the beginning of the year all of the teachers in the experimental inservice program were at 0 level except three who could be classified as 1, and all of the teachers we observed who attended an eight-week training program at Colorado State College[1] were at the 0 level. At the end of the year, the teachers were classified as follows:

	Inservice	Eight-week Program
0	4	1
1	4	1
2a	4	1
2b	3	1
3	5	1

1. In addition to using the same material that was used in the experimental inservice training program and observing and teaching at the New Nursery School, the trainees at the college received instructions on child growth and development and attended seminars related to their experience in the classroom.

In accord with the criteria noted above, we would have to conclude that the inservice training program was a failure with eight teachers (40%), acheived moderate success with 40%, and was successful with 20%. The eight-week program at Colorado State College was a failure with one teacher, achieved moderate success with two teachers and was successful with one teacher.

However, the number of teachers observed who took the eight-week program is so small that the most that we can say is that the data allows a tentative conclusion that the two programs yield similar results.

One question, of course, is how much confidence can we place in this analysis? We made observations at the beginning of the program and at the end of the program using a schedule and the form of the observation schedule that was used required considerable interpretation and judgment on the part of the observer. The observers were not trained at the beginning of the program; the schedule was revised somewhat after the first observations, and the observations were not made in all classrooms until after the program had been in operation for two months. Under these circumstances the schedule itself was of limited usefulness in a rigorous pre-posttest evaluation model, but the observation did help us describe the classrooms and develop a basis for judgment of the program's effectiveness as we have noted above.

We can place more confidence in the observations that were made at the end of the program. Eighty-five percent of the observations were made by one person who had been observing the classrooms throughout the program and had observed all the classrooms at least once. The other 15% were made by another individual who had been involved with critiquing videotapes and had done some observing. We do not have inter-rater reliability on the two observers, but the observer who had been in all of the classrooms during the year compared his previous observations of the classrooms with the observations of these classrooms by the second observer and concluded that the observations were reasonably similar. All the observations were made during the last two weeks that each center was in operation.

The teachers' evaluation of the effectiveness of the program appears to be higher than our own. Thirty teachers and assistants who attended the reporting session at the end of the program and filled out questionnaires responded as follows:

1. Nineteen (64%) said their language habits had changed a "great deal", 11 said "some", and one said "none".

2. Sixteen (53%) said their discipline had changed a "great deal", 12 said "some", and three said "none".

3. Twenty-seven (90%) said that they spent "much more time" teaching basic concepts than before the program began. Nine said they now stress basic concepts and 17 said they put an equal emphasis on arts and crafts and basic concepts while four still stress arts and crafts.

4. Sixteen (53%) said they use a learning episode every day, nine said they use an episode at least once a week and five said they use an episode once in a while.

5. Nine answered that they still "direct children into activities", the other 21 either allowed children to freely choose activities or activities from a limited number of choices.

6. All of the teachers and assistants said the program had affected their classrooms. Twenty-one said it had a great effect and nine said it had some effect.

The attitude of the majority of the teachers towards the program was positive. Eighty percent of the teachers and assistants who finished said they would like to continue for another year. Twenty-five of the 30 teachers said the program provides "a good balance between two much structure and too little" for the children, four thought it would result in an over-structured classroom and one felt that there was enough structure.

The Factors That Related to the Success or Failure of the Program

We would assume that the teachers who spent the most time and effort on the program would achieve more than those who spent less time. We have one indication of the effort the teacher made--the number of learning episodes she mailed to the Laboratory to be critiqued--but this is only an indication because in some instances the teacher could not videotape because the videotape recorder was not available to her. Table 1 shows the relationship between success or failure and the number of learning episodes that were mailed to the Laboratory. On the average each teacher mailed in six learning episodes. As the Table shows there was a significant relationship between the success or failure of the program with a teacher and the number of learning episodes that were critiqued for that teacher.

Table 1

The Relationship of the Success or Failure of the Program to the Number of Learning Episodes that the Teacher Submitted for Critiquing

	Number of Learning Episodes Submitted						
	1-2	3-4	5-6	7-8	9-10	11-12	13-14
Failure	3	3		2			
Success		1	4	3	1	2	2

$x^2 = 8.97$, $P < .05$, $df = 2$
Using Kolmogorov-Smirnov Two Sample Test

The amount of the relationship that can be attributed to the motivation and effort expended by the teacher and the effect of the feedback provided by critiquing the episodes is unknown. In any event, the combination of these variables is significant and the centers where the teachers were working was a significant factor. There was a positive relationship between the success or failure of the program with the teachers and the center where they were located (See Table 2).

Table 2

The Relationship of the Success of the Program and the Center Where It Was Tested

	Centers					
Teacher	1	2	3	4	5	6
Failure	2	2	3	1		
Success		1	2	3	4	3

$X^2 = 8.22$, $P < .05$

Also, there was probably a relationship between the centers where a teacher worked and the number of learning episodes she mailed to the Laboratory. ($x^2 = 5.82$ -- to be significant at .05 level x^2 would have to equal 5.99).

Actually the term "center" is somewhat misleading because we referred to a center as a test site involving five classrooms under one community action agency, but in some instances the classrooms were scattered over a county and operated by different delegate agencies. Two centers were located in one county; the others were in different counties.

Based upon our first observations we did not judge the teachers in any one center to be significantly better than the teachers in other centers. The difference we found between centers was based upon rank ordering the centers according to the amount of interest and involvement in the program by some individual in a supervisory position.

Someone in each agency that operated one or more of the classrooms had made the decision to be involved in the program. In most instances this was with the approval of the teachers but on the operational level the supervisors behaved differently. Some gave a high priority to the program; they made sure that the videotape recorders were moved from classroom to classroom, they encouraged the teachers to mail in their videotaped learning episode, and they discussed the program with the teachers. Other supervisors were passive, neither encouraging or discouraging the teachers, and the videotape recorders did not get moved on time.

The sixth center was ranked first and the fifth center second because of the active interest a county education office supervisor showed in the program and in addition in center six the local Head Start director was actively involved. The teachers in center six turned in an average of 13 learning episodes which is at least one episode for every two weeks the program was in operation. In center five the teachers turned in an average of seven learning episodes.

There was very little difference in the administrative support in centers two, three, and four. In each instance the classrooms were scattered and operated by different delegate agencies and in each instance some head teachers or local Head Start directors gave considerable support to the program while others were interested but not actively involved. We ranked them four, three, two.

The teachers in center four turned in an average of five learning episodes, as did the teachers in center three, while the teachers in center two turned an average of six.

Even though the county Head Start director asked to be involved, the last center, number one, clearly gave the program the least support. The county Head Start director and the staff were having internal administrative problems. The person in charge at Head Start training in that county was at best passive towards the program and gave the teachers no assistance. No local director took an active interest and the videotape recorder was not moved from classroom to classroom with any kind of regularity. Only two teachers in that county finished the program and they each submitted one learning episode for critiquing. The program was a failure with both teachers.

Discussion

Obviously this training program is not ready for general use to train teachers to use our particular approach to early childhood education or as a model that can be used to develop a training program to introduce other approaches. It may be as effective as the eight-week training program and in the center where it received appropriate administrative support it may be more effective. When one compares the cost of the two programs, the inservice program certainly is the most promising.

It also has other practical advantages. All the teachers and assistants at a given location are trained in the same approach at the same time; thereafter they can reinforce each other. This is not the case with on-campus training programs. Furthermore, the inservice program reaches teachers who cannot leave home for eight weeks. At the end of the training program we asked all the teachers which they would prefer--to take the same course during an eight-week session on some college campus or this inservice course. Eighteen out of the twenty who responded said they would prefer the inservice course if they could receive some college credit for their efforts.

From our first year's experience, which we regard as a preliminary test, several revisions seemed to be indicated. (1) More on-site support was necessary to accomplish two purposes--provide support and encouragement for the teachers and to help the teachers improve their classroom control and procedures. (2) A more efficient mechanism for handling the critiquing of the videotapes than the use of the mail needs to be devised. (3) Too much material was included for the time that was available for the course. Either the volume of material should be reduced or the course spread over two years or both. (4) The teachers and assistants should receive meaningful education credit for the work because it would provide the necessary motivation to them to give the time to the inservice program that is necessary if it is going to be effective.

We are now in our second year of revising and testing the inservice program. In a way this year is a recycling of the preliminary field test. In the initial plan we had indicated that during the second year we would train field assistants who in turn would train twelve teachers and twelve assistants each year. It so happens that this approach also promises to provide a solution to some of the problems noted above. The field assistants are on site to provide the necessary

support and can work with each teacher and assistant in their own classroom. The field assistants are critiquing the videotapes of the teachers they are working with instead of the tape being mailed to the Laboratory. The Laboratory is training the field assistants and supplying the materials. The field assistants have attended one two-week siminar at the Laboratory and will attend three more one-week seminars during the course of the year. One desirable aspect of the original program design is lost with this arrangement-- the critiquing of the videotapes by an anonymous person at the Laboratory whose opinions could be accepted or rejected by the teachers. the majority of the teachers in the original program liked this feature of the program which is lost when the local assistant does the critiquing. Another problem with the revised procedure is that the Laboratory has less control over and direct contact with the teachers and assistants by working through the field assistants.

Nevertheless, based upon our first year's experience we believe the program this year will be at least moderately successful with most teachers and will have good success with the majority. The program will then be ready for a performance test with all of the techniques, procedures, and materials worked out in advance and a carefully designed evaluation that will allow us to make definite conclusions about its value.

During the year required for the performance test the Laboratory plans to work out arrangements with colleges and universities or other agencies to assume the the continuing responsibility for the training of Head Start teachers and assistants. The Laboratory would continue for two or three years to train program assistants to work with the colleges and universities.

GN:ls:bs
2/28/69

APPENDIX A

EXAMPLES OF THE TRAINING MATERIALS THAT WERE USED IN THE PROGRAM

CONTENT OF TRAINING UNITS

Training Unit I

Color Lotto
- Learning Episode A -- Exploration and Experimentation
- " " B -- Visual Discrimination; "Same color"
- " " C -- Saying color names
- " " D -- No visual clues; names of colors only

Include: Language Guides for Teachers of Young Children
General Classroom Control

Training Unit II

Same As--Different From
- Learning Episode A -- "Same size as"
- " " B -- "Not the same size as"
- " " C -- "Different from (other than)"
- " " D -- "Same size as" and "Different size from (other than)"

Include: Simple Concept Formation
Classroom Procedures

Training Unit III

Introduction--Self Concept
- Learning Episode A -- Use of song with children's names
- " " B -- Use of song with child's name and article of clothing he or she is wearing
- " " C -- Language Master -- child sees and hears name
- " " D -- Language Master -- child records name

Include: Dress-Up Area

Training Unit IV

Development of Senses--Muscular Tactile
- Learning Episode A -- Drawstring bag; child identifies what he feels in the bag
- " " B -- Feeling material; child finds material the same as one he is holding
- " " C -- Objects in the box; given description, child finds object in the box
- " " D -- Child is given three-dimensional letter and finds a two-dimensional representation of it

Training Unit V

Introduction--Language Development
Learning Episode A -- Naming child's activities on playground, in room
" " B -- Pictures of child's activities to provide using certain sounds
" " C -- Songs to develop language skills; emphasis on action verbs
" " D -- Reading Corner

Training Unit VI

Concept Formation
Learning Episode A -- Opposing or contrasting condition (opposites)
" " B -- Opposing or contrasting location (opposites)
" " C -- "Apple"--concrete-semi concrete-abstract
" " D -- Grouping

Include: How to Construct a Learning Episode
Concept Formation Area
Concept Formation Based on Food

Training Unit VII

Introduction-Concept of Number
Learning Episode A -- Functional Counting
" " B -- Cut Out Numerals
" " C -- Numberite Puzzle
" " D -- One-to-one Relationship

Training Unit VIII

Senses and Perception
Learning Episode A -- Discrimination between sounds
" " B -- Child identifies objects from sound only
" " C -- Color Memory Game
" " D -- Methods for helping children to taste and smell more acutely

Training Unit IX

Introduction--Importance of locational words, such as above, below, in front of, etc.
Learning Episode A -- Use of songs to learn various words
" " B -- Ball and Language Master Cards
" " C -- Child following directions to stand "in front of," "beside"
" " D -- Over-under rope (examples of other outdoor activities)

Training Unit X

Introduction--Problem-Solving
Learning Episode A -- Patterns with concrete materials
" " B -- Puzzles with concrete materials
" " C -- Color-elimination
" " D -- Unstructured--take advantage of things in room; one example developed; ways to divide toys; wood inlay puzzles

Training Unit XI

Introduction--Geometric Shapes (circles developed as an example)
Learning Episode A -- Felt Boards
" " B -- Spot painting on circles folded into semi-circles
" " C -- Finding a shape when he hears the name
" " D -- Learning other shapes

Trainign Unit XII

Geometric shapes and color
Learning Episode A -- Coordination board; classifying on specific basis
" " B -- Eliminating object that does not belong to group of objects in box
" " C -- Associating geometric shapes and colors
" " D -- More complicated associations of shapes and colors

Training Unit XIII

Relational concepts--relative size
Learning Episode A -- Blocks; longest, shortest
" " B -- Largest-smallest
" " C -- Tallest-shortest, Taller-shorter; nesting cup towers
" " D -- Larger-largest; smaller-smallest objects

Training Unit XIV

Problem-Solving
Learning Episode A -- Gussing what is in the package
" " B -- Which one doesn't belong in this group?
" " C -- ABC elimination (chalkboard)
" " D -- "My Slippers are Red" - use of books for problem-solving; or "Which piece is missing" with puzzles

Training Unit XV

Geometric shape, color and size
Learning Episode A -- Attribute blocks; child associates color and shapes
" " B -- Parquetry blocks; child associates colors and shapes
" " C -- Largest red circle (felt board or attribute blocks)
" " D -- Combining color, shape and location

Training Unit XVI

Combine color, shape, size, space relationships
Learning Episode A -- Twister game; child is able to place himself on colored circles
" " B -- String shapes on floor; child is able to place himself inside, outside colored circles
" " C -- △ ○ ▭ plus color and size, on floor; child taught to place himself inside, outside large or small circles, squares, triangles
" " D -- Outside game like hopscotch to teach child to associate colors, sizes and shapes

(SAMPLE OF INSTRUCTIONS)

TRAINING UNIT I

INSTRUCTIONS

Please read the following instructions in the order given:

1. Read the following written material first:

INTRODUCTION.....1
THE COLOR LOTTO GAME.....1-2
LEARNING EPISODES (I-IV).....2-11
CLASSROOM PROCEDURES.....12-16

2. Practice using the four learning episodes.

3. Next, view the film clip of the model teacher at least twice. Note that the film clip begins with Learning Episode III. It does not show Episodes I and II which are described in the reading material.

4. Select one of the learning episodes for the Color Lotto game. Then videotape yourself and the children using the twelve-minute blank videotape. Play back the results. If you do not want to mail that recording, try again, but don't be too concerned or criticize yourself too much. Remember that this is a learning situation. No one expects perfection, and we all learn from our mistakes.

5. Read the section on Classroom Control.

GENERAL CLASSROOM CONTROL.....17-27

Select one or two behaviors you would like to try with your children or something in your own behavior you would like to change, and practice on them during the next two weeks.

6. Fill out the questionnaire and mail it and the videotape to the Far West Laboratory for Educational Research and Development.

A RESPONSE QUESTIONNAIRE.....28-30

Note: Only one film is sent to each Center. It should come to you with the videotape recorder.

(SAMPLE MATERIAL)

THE COLOR LOTTO GAME

Purpose:

The primary purpose of this game is to develop the child's ability to discriminate between colors and to learn the color names.

Equipment needed:

The equipment for this game must be made, as it is unavailable commercially. Cardboard or construction paper can be used, but we recommend sturdier material, such as felt or painted hardboard.

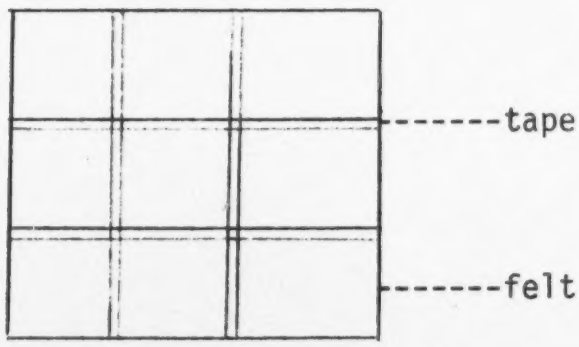
The following supplies are needed for four children to play. (This would be enough for a class of 15-20 children):

1. Four pieces of hardboard, each nine inches square.

2. Plastic tape (such as Scotch "Mystic" tape) or glue.

3. Nine pieces of colored felt, large enough to cut nine, three-inch squares. Start with red, yellow, blue, green, white, black, orange, brown, and purple. As the children progress, finer discriminations can be presented on a different set, such as dark blue and light blue, dark green and light green, red and pink, black and grey.

Tape (or glue) the different colored squares of felt to the hardboard, so that each board has one square of each color. Arrange the colors in a different way on each board, so the children do not memorize the order in which the colors appear.



Four of the squares of each color are for the children, and one is for the reacher.

Note: The Learning Episode A's purpose is to let the child become familiar with the material through exploration and experimentation. It has been omitted from this sample of materials.

LEARNING EPISODE B

Purpose:

The purpose of this learning episode is to develop visual discrimination and to help the child learn the term "same color."

Procedure:

With an interested child or children, the teacher can begin to introduce direction to the game. How soon this is done depends upon the age and background of the children, their capabilities and interests. Each group will be different. Some indications to watch for are: (1) loss of interest in the material for free play; (2) matching and grouping of colors in free play, not only with this material but with other things in the room; and (3) naming of some of the colors.

Collect all the individual squares and group them according to color. Hold up a colored square and say, "Find a square on your board which is the same color as this square."

If the child does not point to the corresponding color square, but says, "I have one," or just holds up his hand, say, "Show me where it is," or "Point to it." When he points correctly, give him the square.

If a child makes a mistake and points, for example, to an orange square when the teacher holds up a red square, the teacher can do any one of several things, depending on the situation and the child involved. She can (1) give the child a chance to correct his mistake by watching the other children; (2) hold the referent (the red square, in this case) closer to the child so that the comparison is easier, and repeat the instruction; (3) hold the two squares close together, point to the orange square (the wrong selection), and say, "This square is not the same color as(pointing to the red square) this square. Look to find a square that is the same color."

Although the goal is to have the child see his mistakes and correct them, this must be done sensitively, so that the child does not feel threatened and become afraid to try. His feeling about himself is far more important than the learning of any one particular item. When all the children that are participating have placed that color, go on to the next until all the colors have been distributed. Some children may simply be watching or playing with their own set of material. This is perfectly all right. Ask if they want to play, but don't urge.

Since each board has the same colors on it, and each child playing gets a square of that particular color at the same time, no one "wins." When all the squares, (except the teacher's) are distributed, a reverse process can be used to remove them. The teacher has a felt square of each color. She holds them up one at a time and says, "Take off (or remove) a square that is the same color as this one."

As the children remove the pieces of felt, they can help the teacher group the pieces according to color so they are ready for the next game.

Whenever there is an empty board a child can join the game at any time; it is not necessary to wait for a new game to start. Also, a child can get up and leave whenever he loses interest; it is not necessary for him to complete a game once he has started it. A child should be able to play this game as many times as he wishes.

Also, children who want to develop their own games should be allowed and encouraged to do so. Even after teacher direction has started, children can continue to use this material for free play.

LEARNING EPISODE C

Purpose:

The purpose of this episode is to help the child associate the name of the color with the color, and to be able to say the name of the color.

Procedure:

Hold up a colored square of felt and say, "Find a square on your board which is red (or blue, yellow, etc.), the same color as this square." When the child responds, say, "Show me where it is." (After the child points automatically, this step can be omitted.) Then say, "Tell me what color it is." If the child replies, "red" or "that red," echo and expand his response by saying the sentence, "This color is red," as you hand him the square. If the child cannot name the color, the teacher has several alternatives, depending upon the personality and confidence of the child. (1) She can, without hesitation, give the child the square and supply the sentence, "That color is red." Next time she might omit that step for that child until he has advanced enough in confidence and skills to be able to reply without feeling threatened. (2) She can ask the child, "Is that color gray or red?" hoping that he lacks only the ability to reproduce the word, and that giving him a choice will help him. (3) She can allow the child a longer period of time to think, then supply the sentence, "That color is red," or ask, "Is that color gray or red?"

If another child interferes by supplying the name of the color, remind him to "Let Gary tell me." If he habitually interferes, remind him before asking the other child, telling him that he will have his turn and that "It is Gary's turn now."

LEARNING EPISODE D

Purpose:

The purpose of this learning episode is to help the child respond to the name of colors only, with no visual clues.

Procedure:

The teacher does not hold up a colored piece of felt, but says, "Find a square on your board which is red." As the child points to the correct square the teacher hands him the individual square and says, "Tell me what color it is." If a child cannot point to the red square, the teacher should drop back to the procedure used in Learning Episode III. Hold up the colored square and say, "Find a square which is red, the same color as this square," or "This color is red."

The felt pieces can be removed from the board by telling the children, "Take off a square which is red.....Tell me what color it was," or "What color was it?" No visual clues should be supplied unless a particular child needs them.

As children become familiar with the way the game is played, they can take turns being "teacher." However, care should be taken that the other children do not become misinformed or bored by a child who does not proceed properly and with enough speed. The teacher should sit or stand close by to supply forgotten sentences and remind the child what comes next.

If at any time a child is not ready for a more advanced level of the Color Lotto Game, allow him to play at the level where he is.

Using the Color Lotto and the learning episodes used to develop it, we would like to make several points which are important in understanding this, and the other learning episodes to follow.

1. Stress is placed upon basic concepts, such as color, shape, size, same and not the same. These concepts are tools for learning, and once a child has learned one or two of them, they can be used to help him learn other concepts.

2. The inductive approach to learning is used. Children are given many and varied experiences with color through art, equipment, books, and so forth, experiences accompanied by words such as "blue paint," "yellow pegs," and "This color is red" before they are given any directed learning experiences leading to the concept of color, or of abstract blueness or redness.

3. Emphasis is placed upon exploration and experimentation. Although suggestions are given for the teacher to help the child form certain concepts, the children are encouraged to play with the material,

develop their own games, either alone or with other children. For example, one group of children extended the Color Lotto Game by bringing other small toys in the room to place on the square--a red peg and red disk for the red square, a blue nesting cup and a blue crayon for the blue square, and so forth. The time allowed for free play upon initial presentation also serves this purpose.

4. The size of the group is flexible and can vary, even within one game, according to the interest of the children. Although some learning episodes will deal with the group as a whole, emphasis is upon individual and small, flexible group work. The teacher's role can be supplemented by teacher assistants, volunteers, and machines to make this informality and flexibility possible.

5. Learning episodes are designed to proceed from simple to complex, and from concrete to abstract both in the skills required and in conceptual understanding. Thus a child is expected to match colors - "Find a square which is the same color as this square," then hears the color names as he sees the color, before he is asked to "tell me what color it is."

   We have tried to present concepts in the simplest form possible, then add to the complexity gradually so the child is not overwhelmed either by too much material presented all at once or by an erroneous assumption of prior knowledge. With disadvantaged children, either mistake is easy to make. For example, a teacher might explain to the children with the aid of a color wheel about the primary and secondary colors, naming the colors as she goes. So much information all at once is overwhelming and unless it was accompanied by appropriate materials to follow up the explanation, would probably be mere verbalization. Likewise, the teacher who assumes that the disadvantaged child knows the names of the colors will wonder why Jose can't seem to follow directions or why he makes so many foolish mistakes.

   Color Lotto uses the term "same color" as a tool for comparison and discrimination and also as a tool for learning the color names, but it does not assume that the child knows the term; provision is made for him to learn the meaning of sameness.

6. The importance of the language used is stressed throughout. In each episode we have indicated certain key words and phrases which are essential to the purpose of the learning episode. This does not mean that the teacher can never vary, that she must woodenly repeat the sentences that are given. It does mean that she can incorporate the key phrases into her own style of speaking and working with the children. Or she can omit repeating every time, as for example, if four children are playing, it certainly would not be necessary to repeat "That color is red," to each child. Once or twice should be sufficient.

   However, we urge that the teacher have a thorough grasp of the purposes and the methods suggested for achieving those purposes before changing much of the suggested language. For example, "matching" activities have traditionally been a part of the curriculum for

early childhood education. It is far more important for the children to see and be able to say how things match. Do they have the same color, same shape, same length, sound or what? The equipment for the Color Lotto game "matches" in every respect except color. Use of the term "match" might easily confuse the child, for he might match on the basis of shape or size. Also, to learn the concept of "sameness" the child must hear the word "same" tied to some distinct attribute of an object - same color, same size, and so forth.

For the purpose of thinking, it is equally important that the child be able to see and say how two objects do not match. For this reason we suggest use of the phrase "not the same color," which will, in later episodes, be used as a transition to the term "different."

7. The complexity of certain concepts should be kept constantly in mind, even as they are broken up into elements of manageable complexity for purposes of presentation to disadvantaged children. The teacher who is aware of this complexity will be less likely to misinform and confuse children, such as teaching that the blocks are "big" or "little" when they are the "longest" and "shortest," "longer" and "shorter." If the teacher appreciates the complexity of most concepts she will be able to accept and encourage the perceptive child whose mind leaps ahead or to the side of the expected path. She will not label as "wrong" the off-beat answer or action, but will, instead, encourage it. For example, in a concept formation test we are developing, one child related a comb to a doll instead of a toothbrush because "The doll's hair needs to be combed." This is a good response, but not one we anticipated. This teacher will also be able to appreciate the difficulties certain children have in comprehending seemingly simple concepts.

(SAMPLE FROM TRAINING UNIT IX)

LEARNING EPISODE B

Purpose:

The purpose of this learning episode is to evaluate and extend an individual child's comprehension of the words of relative location or position.

Given verbal direction to place himself or an object in a certain location, the child is able to do so.

Equipment:

A puppet, as in Learning Episode A, if desired.

A ball, block, plastic figures, or other small objects that can be placed in various locations to help the child form a concept of relative position or location. The concept of relative position or location depends upon the understanding of such words as the following:

in front of - behind (in back of is acceptable) - beside
in - out
inside - outside
over - under
on (top of) - underneath
on - off
between
next to - by - at the side of
front, back, side

We would suggest postponing introduction of above and below until the children are sure of the meaning of over and under. The differentiation in meaning is subtle, but quite definite - the words should not be used synonomously.

Procedure:

This activity can be done with a large group, with a few interested children or both. Wait until the children have a good grasp of the locational words (besides, below, in front of, between), as indicated by their ability to follow verbal directions only to the group,(Learning Episode A) by their ability to follow those directions given informally in the classroom, or their ability to use the words correctly in their speech. It is not necessary, however, to wait until every child can follow the more difficult directions - some may never get to that point. If the directions are given to the children in a group, give the child a direction that he will probably be able to do, so that he is not embarrassed in front of the other children.

For suggestions on grouping the words for maximum learning possibilities and for written planning, see Learning Episode A. In selecting the directions to be given, we would emphasize again two points that are particularly relevant to this learning episode.

First, to evaluate the child's comprehension of the concept of relative location of position, and his ability to extend the concept to other situations, a wide variety of situations must be presented. Second, it is not necessary or even desirable, that these be presented in one day. Distributed practice, in a variety of ways and situations is preferred. Let us use the word "beside" as an example of both of these points.

In all probability, the word "beside" would first be introduced informally as children and teachers get toys out, work with them, and put them away. The teacher must be aware of the learning possibilities inherent in routine classroom conversation, for this is where much of the child's learning will occur (see Language Guides for Teachers of Young Children). A planned learning situation can focus attention, introduce skills, provide practice or extension of skills. Nevertheless, the skill will not become natural unless the child uses it in his language.

Take advantage of every opportunity to use the word "beside."

"The pegs are on the bottom shelf beside the felt boards."

"Ruth, there is a chair for you beside Margaret."

"There is room for you in the rocking boat, Max. Sit beside George."

"Jose, please pick up that puzzle piece beside your foot."

"The ladder is beside the steps."

If the child does not comprehend, the teacher can gesture or show him the location repeating the sentence as she does so.

The next step might be a planned learning situation, such as "Leo the Lion," Learning Episode A. Verbal directions are given to a group of children.

Leo the Lion says, "Put your hands beside you.
Put your hands in front of you.
-Behind you.
-Hands beside your foot.
-Hand behind your foot."

Small groups of children or an individual child can do the same activities on succeeding days.

An action game such as the one below might be used.

"Hands on shoulders, hands on knees
Hands beside you, if you please."

The next step might be the one suggested for this learning episode, giving the child a direction to place himself or an object in a given location.

"George, go stand beside Ruth."

"Mark, you go stand beside the bookshelf."

"Max, go sit beside Cathy."

"George, put the orange chair beside the white chair."

"Margaret, put the block beside the book."

"Jose, come put a red cube beside a blue cube."

"Ruth, put this ball beside the box."

A grouping can emphasize one particular relationship, such as that suggested immediately above. A grouping can also emphasize the variety of locations a person or object can be, such as the two suggested below.

"Cathy go stand in front of Ruth.
-Behind Ruth.
-Beside Ruth.
-Between Ruth and George."

"Max, put the pencil on top of the box.
-Underneath the box.
-Beside the box.
-In front of the box.
-Behind the box."

Both are appropriate, and either one could be extended to form the basis of a group activity, or informal activities with an interested child or children.

For a group time, pull the children together with a song, then "Leo the Lion" or the teacher can give directions. If the children are placing themselves in various locations, remember to have them go sit down occasionally.

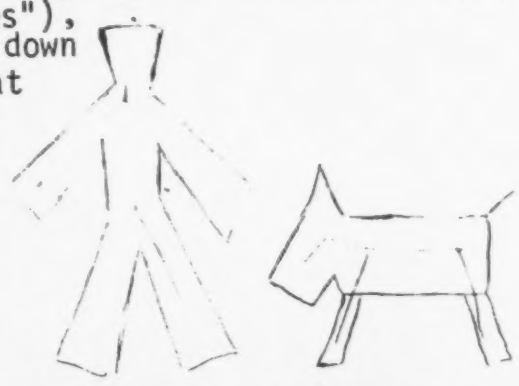
If Marie makes a mistake and stands in front of Ruth instead of behind her, the teacher or child can say where Marie is standing, then let Marie or another child stand behind Ruth.

If Marie is standing in front of Ruth, and George is behind Ruth, then where is Ruth? Ruth is between George and Marie, of course.

Keep the game exciting by using all possibilities for problem-solving and discovery. "Ruth, go stand in front of George...George, go stand behind Ruth."

"Max, you go sit beside Julian....Julian, you go sit beside Max." Small group activities can be generated several ways. Children who are playing with counting cubes, Cuisenaire rods, blocks, or other manipulative toys frequently arrange them in such a way that the teacher can comment on what they have done, and suggest something else. "Chris, you've put the red cubes on top of the blue cubes. See if you can put the yellow cubes on top of the red ones."

The teacher can also sit down with the necessary objects, and wait until children express an interest. One or two unfamiliar and intriguing objects to place will almost guarantee an interested group of children. Try plastic figures with wire in them (such as "Gumbies"), which can stand up in front of a box, sit down on the table, a chair, or a shelf, lie flat underneath a box, or be held over a book. These or similar figures can be purchased at most variety stores. If they are not available, any small object can be used. Several objects should be available for placing, so children don't have to wait too long for a turn.



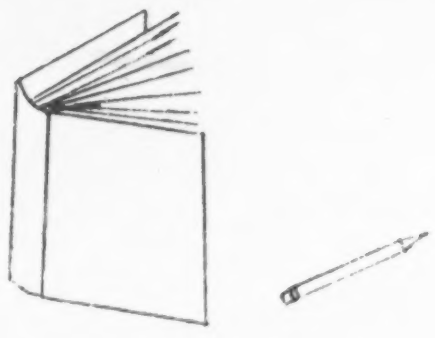
Variety and imaginative directions will keep the game interesting.

"Max, have Gumby sit on the book, now have him stand on the book. I wonder if Gumby can walk over to the bookshelf, and stand in front of a book."

"Let's make a corral out of these blocks. George, you put your Gumby inside the corral; Max, put your Gumby outside the corral. Marie, where shall we put Gumby? We can sit on the fence, with one leg inside the corral, and the other leg outside the corral."

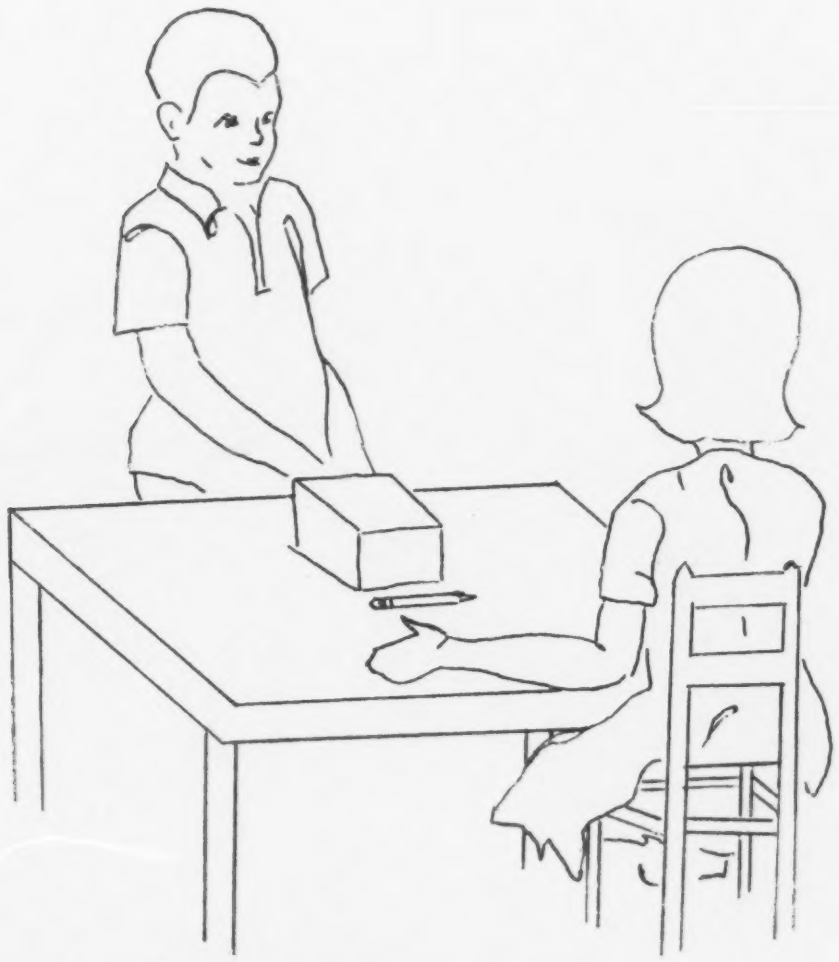
In all of the activities suggested above, the teacher may want to ask the children to say where George is, or where Gumby or the cubes are, to help make the transition from reception of speech to expression. However, remember that there is more than one way to express a positional relationship. Accept answers that are correct, even if they are other than the expected one. (For a more complete discussion, see Learning Episode C).

In giving the children directions, make sure that the direction you give can be carried out without distorting the standard usage of the word. If in doubt, try out the directions on another adult. As an example, let us use a grouping similar to the one which said, "Put the pencil on top of the box, underneath the box, beside, in front of, and behind the box." All these directions could be easily carried out. But if a book is used instead of a box, complications arise. The first three directions (on top of, underneath, beside) can be carried out if the book is lying on the table or standing on the shelf. However, the last two are appropriate only if the book is standing up, so that it possible for the child to put a pencil in front of, or behind it.



The teacher must also be aware that the position of the observer often determines the words of relative location.

If a group of children and the teacher are seated around a table, placing objects in relationship to a large box,



the object that one child places behind the box will be in front of the box to another child. This problem can be simplified some by placing the table against a wall, and the box close to the wall, so in front of and behind are fairly clear cut. However, after the children have caught on to the game and have learned the words of relative location, there is no reason they cannot begin learning more about the concept of relative location--and acquiring a better understanding of the meaning of the words.

Move the table out from the wall. Let the children discover that an object behind the box for one child may be in front of the box for another. Let the children change positions or walk slowly around the table to discover the position of the object they placed behind the box now that they are on the other side of the table.

(SAMPLE FROM TRAINING UNIT XII)

LEARNING EPISODE B

Purpose

The purpose of this learning episode is to help the child form a concept of a group or set by having him eliminate the object which does not belong in a particular group.

Level 1. Given an array of objects, one of which does not belong in this group, or set, the child is able to select the one which doesn't belong.

Equipment:

The teacher can either have ready several groupings of objects or just use the toys the children are working with. Until the teacher if fully at home with the many bases of grouping, we would suggest the former, so that careful selections can be made ahead of time.

Start with simple, easy discriminations, based on one readily identifiable attribute, then advance to less obvious groupings as rapidly as the children are able to. Possibilities for groupings are listed below, but each teacher should select objects with which her children are familiar. These are examples only. There should be enough objects in the set to make it easy for the child to select the object which doesn't belong. We would suggest at least three or four.

A. Color

Parquetry blocks	Four blue triangles, one yellow triangle, three orange diamonds, one purple diamond, four green squares one red square.
Plastic discs	Several yellow discs, one green disk.
Pegs	Several purple pegs, one blue peg.
Felt shapes	Several blue circles, one green circle.
Color memory game cards	Several of one color, one of another color.

B. Shape (Should be all the same color or all of differing colors)

Parquetry blocks	Four yellow diamonds, one yellow triangle.
Blocks	Three half-unit (square blocks), one triangle. Five triangles, one circle.

ESS attribute blocks	One yellow circle, one red circle, one green circle, one blue diamond.
Felt geometric shapes	Four rectangles, one circle.
Beads	Several cubical beads, one round bead.

C. Size (Should all be the same color or all of differing colors)

Blocks	Three double unit blocks, 12" (check lengths), one quadruple unit 24" four unit blocks, one half-unit.
ESS Attribute blocks	Red, yellow and blue squares of one size, one square of another size.
Masonite or plexiglass "same size" square	Three or four squares of one size, one larger or smaller.
Dowel Rods (for "same length" games)	Three or four dowel rods one length, one longer or shorter.
Felt geometric shapes	Several circles one size, one circle larger or smaller.

D. Color and Shape

Parquetry blocks	Four orange diamonds, one blue triangle. Three blue triangles, three yellow triangles, one red square.
Beads	Four circular-shaped beads, differing colors, one cube.
Felt geometric shapes	Four yellow squares, one green circle four red triangles, one yellow triangle.

E. Other Possibilities

From the beginner puzzle:

1. Banana, pear, apple, airplane.
2. Zebra, monkey, elephant, tugboat.

Parquetry blocks	Three triangles lined up in one position, one in another △△△▽
Felt geometric shapes	Four felt rectangles in one position, one in another ▭▭▭▭▯

F. "Which objects don't belong in this group?"

Blocks	Six triangles, two squares. Several squares, a triangle and a semi-circle.
Parquetry blocks	Eight to ten diamonds, a triangle and a square.

Change the basis of grouping sometimes as the children watch you. For example,

could be changed to,

or

We want the child to get the idea that there are many different bases of grouping.

Procedure:

Place a grouping of objects close together on a table or on the floor. Then ask an interested child, "Which object doesn't belong in this group?" A hand gesture or piece of string outlining the group will help the child understand what is meant by "group."

If the child points to the object that doesn't belong in this group, supply the sentence for him, "the green disc doesn't belong in this group." If the child's ability and self confidence indicate, the teacher can request the child to "Say it," or "Tell me which object doesn't belong in the group." Then remove the object which doesn't belong so the group or set is left.

If the child points to an object other than the one the teacher has in mind, see if he can indicate or tell why he made that choice.

We would caution the teacher to be alert to the possibility that the child may form a group other than the one the teacher had in mind. Even with very careful selection of objects by the teacher, this may happen.

The child's grouping should not be labeled as "wrong." It is only different. Such perceptions should be encouraged. One teacher gave a child the grouping from the beginner puzzle suggested above -- a banana, a pear, an apple, and an airplane. The airplane happened to be yellow, so the child selected the apple as the piece which didn't belong in the group. The observable attribute color was the one he perceived. His choice was certainly not wrong, just different from what the teacher had in mind.

Some children do not seem to be able to solve the problem at all. Whether they do not grasp the idea of a group, or see no relationship among the various objects in the group, or for some reason are unable to isolate the distinguishing characteristics, is impossible to tell. Perhaps the grouping is too difficult -- drop back to an easier one, if there is one. Enclose the objects with string to

help establish the idea of a group. If distinguishing attributes permit, the teacher might try pointing to each one and verbalizing. "This is a red disc; this is a green disc; this is a red disc; this is a red disc; which doesn't belong in this group?"

Sometimes the child needs more preliminary experiences, such as in Learning Episode A.

The teacher should have in mind various groupings so that she can progress rapidly from one to the other. Otherwise the children will probably lose interest.

Level 2. A step further in problem-solving can be provided by asking the child "Why?" after he indicates or says which object does not belong in the group. It is far easier to decide which object is out of place than it is to isolate and find words for the differentiating characteristic or characteristics. In many, if not most of the cases, the teacher will have to help the children with the words. The teacher sometimes has to supply the words completely, as when the child just points to the differences. Sometimes the teacher has only to relect the child's incomplete or inexact language in a correct form. "They ain't the same," may be reflected as "The blocks aren't the same shape" or "This block is not the same as those blocks."

The child may only be able to point to the distinguishing characteristics. For example, in this grouping a child pointed to the narrow line of one triangle and the broad lines of the others. The teacher supplied the sentence, "Three of the triangles have broad lines, and one has a narrow line."

Children who have played this game many times become quite sensitive to incongruties in groupings. Toward the end of her second year in school Ruth listened to a record she had heard many times before, which went:

"How does the cow go? Moo-Moo"

"How does the Duck go? Quack, Quack"

"How does the rooster go? Cock-a-doodle-do"

"How does the train go? Choo Choo"

Ruth indignantly asked, "Why did they put the train in? It ain't no animal."

(AN EXAMPLE OF GENERAL PAPERS INCLUDED IN THE TRAINING UNITS)

LANGUAGE GUIDES FOR TEACHERS OF YOUNG CHILDREN

The teacher of young children must be aware of the importance of his use of language. The teacher must be a model of correct speech. He must know how to give directions that can and will be followed. He must know how to ask questions that will elicit appropriate responses. He must know how to give explanations at the child's level of understanding without presenting false concepts. He must be precise in his thinking and in his speech so that he does not, in the process of talking with the children, help them to learn the wrong things. In addition, the teacher must be sensitive enough to know when to talk, and when not to talk.

The following suggestions for teachers of disadvantaged children appeared in the magazine Young Children in Fall, 1967.

One of the most obvious differences between the so-called "advantaged" child and the "disadvantaged" child is the fluency and precision with which the advantaged child speaks his native tongue.

"It has been found that throughout the entire sequence of language development, from the earliest stages of speech in the first two years of life, there is retardation among disadvantaged children. Furthermore, this retardation should not be thought of entirely as a matter of the child's merely lagging behind the middle-class child, with the same level of development merely being attained somewhat later. The characteristics of the language habits that are being acquired and the kinds of functions the language serves in the child's experience actually shape his intellectual development, especially the development of the ability for abstraction and conceptual learning. Poor development of these abilities place a low ceiling on educational attainment." (Wilson, et. al., 1966, pp. 22-23)

Various experimental programs are attempting to develop and evaluate methods of teaching preschool children standard English and English as a vehicle for thought. These programs range from structured language pattern drills, such as are used at Carl Bereiter's academically oriented preschool at the University of Illinois, to simply placing the child in a warm, accepting milieu, with experiences that hopefully will motivate the child to talk.

To meet the needs of these children the New Nursery School has approached the question of language development in several ways. Appropriate audio-visual materials, such as telephones, typewriters, cartridge tape-recorders, and Language Masters are used extensively. Traditional nursery school activities, such as art, reading, manipulative toy, and block play, have been examined to develop ways of enhancing language development. In addition, attention is focused upon the teacher's use of language, since if he is to be the model for the children, he should be quite aware of what he says and how he says it. This article will deal with that aspect of the program only, ways the teacher can help the disadvantaged child by conscious use of accurate, precise English.

Language development for the disadvantaged child involves far more than a Pygmalion-like effort to mitigate social differences. Important as such an effort is, even more important is emphasis on language development as a tool for thought: for labeling, concept formation, problem-solving, making associations, and information retrieval.

Dr. Millie Almy has said, "Interactions between perceptual and verbal experience in the period when concepts are being formed have a good deal to do with the kind of intellectual ability the child displays latter on." (K. Read, p. 323)

The cruciality of this verbal experience can hardly be overemphasized. This does not mean, of course, that the child is subjected to a barrage of words. It is the right words at the right time that are important. To help the teacher have ready the "right words" for the disadvantaged child we suggest the following guides.

1. Use the sentence as the basic unit of speech. If a child asks, "Hay tees?" (What's this), say, "That is a giraffe" rather than "A giraffe" or "This is a fireman's hat" rather than "A fireman's hat." Although for most of us the words "a giraffe" or "a fireman's hat" constitute an acceptable sentence, they do nothing to indicate the speech patterns of standard English, which disadvantaged children need as much as they need words for labeling. Poor and incomplete sentence structure is very common among these children. They frequently will try to communicate by giving only the key words in a sentence, expecting the listener to fill in connecting words and verbs. "No me play" is to be interpreted as "I don't want to play." "Milk?" "Cookies?" is said instead of "When will we have milk and cookies?"

2. Whenever possible, include the category or classification in the sentence such as, "That animal is a guinea pig" or "That color is yellow. This color is blue." After many experiences with things colored yellow, blue, and pink, experiences accompanied by sentences such as "That color is yellow," the child can begin to generalize, to classify, to form a concept of "color."

   After many experiences with rabbits, ponies, guinea pigs, gerbils, and kittens, experiences accompanied by sentences such as, "The rabbit is an animal" or "This animal is a guinea pig," the child can begin to form a concept of "animal."

   Although, "a concept is not a word .... words are a greater help than other kinds of symbols in building up the understanding which we call a concept" (Russell, p. 118). Careful wording by the adults who work with children can help the child form some of the classifications and generalizations necessary to concept formation.

3. Use specific descriptive words rather than non-specific relative pronouns, pronouns, and other overly general terms. If a child indicates that he wants a particular toy (and the word "indicates" is used intentionally here; many of these children have no functional language at all), the teacher can say, "The pegs are on the bottom shelf beside the puzzles." Gestures can be used, if necessary, to make the meaning clear.

   Contrast the learning possibilities in the preceding example with a reply that might be given to guide the child to the same box of pegs. The child indicates or asks for the pegs; the teacher points in the general direction and replies, "Right over there."

   Say, "The crayons go in the cabinet below the window," rather than "They go in there."

   Say, "The puzzle piece is on the floor under your chair," rather than, "There it is."

   Say, "You push the table and I'll pull it," rather than, "Let's all help."

   The teacher who is aware of the importance of words such as, "on-off," "above-below," "in-out," "push-pull," "and-or," and so forth, will find (or make) endless opportunities to use them. These words can be learned only in relation to other words and actions and cannot be learned as one might, "dog," "cat," "table," or "milk."

   Conscious use of specific determiners by the teacher will help increase the child's vocabulary and also make it easier for him to understand what the teacher is saying.

4. Give the child enough information to keep him from becoming confused. Children who do not have the descriptive vocabulary and the concept of texture will be confused by such statements as, "This is rough; this is smooth." Help the child by naming the substance as well as describing its properties or attributes. Say, "The sandpaper is rough; the board is smooth."

   Children who do not have the color names and the concept of color will be confused if the teacher talks about "yellow" and "red" instead of "yellow paint" and "red crayons." Jose, painting at the easel, asked the teacher for more "yellow." The teacher looked at his paint supply, then said, "Why Jose, you have plenty of yellow." "No, not that yellow," he said, pointing to the yellow paint. "This yellow," pointing to the blue paint.

   Ask, "Do you want red paper or white paper to paste on?"--indicating the difference, if necessary.
   "Jack will use the purple pegs, Nita can use the yellow pegs."

5. "Matching" activities have traditionally been a part of the curriculum for early childhood education. It is far more important for the children to see and be able to say HOW things match. Do they have the same color, same shape, same length, sound, or what? The teacher can aid the child by making the distinction in her speech. If a child groups all the red toys he can find, the teacher can say, "Yes the toys are all the same color, red," rather than, "Yes, they all match." If a child working puzzles points excitedly to the wheel of the locomotive, the orange and a circle, the teacher can say, "The wheel, the orange, and the circle all have the same shape."

   For the purposes of thinking, it is equally important that the child be able to see and say how two objects do not match. If a child playing a Color Lotto game, for example, picks out an orange square instead of a red square, he can, with the adult's help, decide that they are "not the same color." Then he can find the square which is the same color as the original.

6. Be accurate in referring to size, height and other dimensions of objects. The refinement of a young child's absolutes of big and little (or "mama" and "baby") to more accurate observation and expression is a long process, but it can begin early. Blocks whose only changing dimension is length should be referred to as "longer"-"shorter," "longest"-"shortest." Children are "shorter" or "taller" than each other. Nesting cups and rings on the color cone vary in all dimensions from smallest to largest. Cuisenaire rods are longer or shorter than another rod. Balls of clay can be larger or smaller than each other, but comparisons of "snakes" are more accurate if done in terms of length or thickness.

Accuracy in the teacher's speech is far more important to the child who has language deficiencies than to the highly verbal child. The latter usually has enough experience and facility with words to interpret what we mean even when we don't say it. This is not true of the child with a limited background in English...."We teachers must begin to look at our ideas and our teachering through the eyes of someone who knows nothing...We must try to free our teaching from ambiguity, confusion, and self-contradiction."(Holt, 1964, pp. 75-76)

For years, teachers and parents have been confusing children by referring to the hands of the clock as "big" and "little." Which hand is "big" - the long, narrow hand or the short, broad hand? They might easily have the same measured surface area. Far more accurate and easier for the child to comprehend are the terms, "longer" and "shorter."

Likewise, the teacher who asks a child to point to the "biggest building in the picture" when he means "the tallest building" is confusing the child who has a beginning concept of "biggest", and misinforming the child who has no concept of "biggest." In their eagerness to have children make comparisons, teachers sometimes ask unanswerable questions, such as, "Which is bigger, a giraffe or a hippopotamus?" Objects of

disparate form and structure, such as block buildings, are usually impossible to classify as larger or smaller. They are better compared as longer, taller, wider, or shorter than another building.

Ambiguous terminology discriminates against every child, but especially against the disadvantaged child.

7. Verbalization of appropriate motor activities increases the child's vocabulary as it enhances understanding of words that might be only partially comprehended. As the child learns basic speech patterns and also more difficult motor skills, other concepts can be introduced. A possible sequence over a period of several months might go something like this:

   "Juanita slides down the board."

   "Juanita is sliding down the board."

   "Juanita slid down the board."

   "Juanita slides down the board backwards."

   "Juanita slides down the board fast (slowly)."

   "Juanita, do you want to slide down the board or run down the board?"

8. An "echo" technique can provide the child a model for his grouping and inexact speech patterns. Of course, this must be done sensitively, and in an encouraging fashion, for mere comprehension of what the child is trying to say is often a major problem.

   The procedure goes like this: The child tries to express himself, the adult gets the meaning and echos it back to him in standard English. For example, if the child says, "Hus got one dem flowers, dem Santa Claus....our house," while he is examining the Christmas tree, the adult can say, "You have a Christmas tree at your house, too."

   If a child indignantly complains, "Ea-ahhee-e-e-me uh" then makes noises imitating a truck, the adult can sympathize by acknowledging, "Yes, I saw Elias hit you with a truck."

   Obviously, this technique does not work in all instances. Personal pronouns cannot be properly incorporated, and often the adult cannot understand what the child is trying to say, no matter how hard they both try. However, it provides the child with a model without the discouraging aspects of a direct correction. When the child hears the teacher echo his sentence, he is usually pleased that the teacher has understood and is interested in what he has to say and he is motivated to continue.

This paper has suggested a few guidelines for ways teachers and other adults can further a child's language development by using accurate and precise speech. Nothing has been said about the "right time" for using the "right words" which is a complete topic in itself. Sensitivity, observation, tact, and patience are required. Too early or constant verbalization is as bad as none at all. But the observant, unhurried adult can wait patiently as a child works to sort and put away pegs according to color, then share his pleasure, and advance his language skills by observing, "You put the pegs that are the same color together. Now let's put the box of orange pegs on the botton, the box of purple pegs in the middle, and the red pegs on the top."